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## HEALTH EDUCATION AS A TOOL FOR IDENTIFYING THE RISK FACTORS ASSOCIATED WITH TOBACCO USE FOR PROMOTING NATIONAL DEVELOPMENT

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### Abstract

The purpose of this study was using health education as a tool to identify the risk factors associated with tobacco smoking and promoting national development. The researcher raised three research questions and three hypotheses to guide the study, self structured instrument was used to collect data sample size for the study was 300 respondents, purposive sampling techniques was used. The instrument was validated in its content and construct value with a reliability coefficient of 0.78. The generated data was analyzed using simple percentage for research questions and ANOVA for stated hypotheses at 0.05 level of significance. The findings revealed that tobacco smoking increases the risk of becoming infected with tuberculosis (TB), increases the risk of passive smoking effects and the risk of induced-asthma among smokers. Based on these findings, recommendations were made as follows: a new product should be tested before releasing it to the public, taxation on production, and distribution of tobacco should be increased. Government should protect the health of individuals by legislating on the control of tobacco smoking in the public places, cease license from the company found wrong, and issuing of new license to new company should not be allowed.

### Introduction

Health education is bringing health information to improve and increase the knowledge of people on health matters which gear towards influencing their attitude and practices. World Health Organization (2014) stated that health education is any combination of learning experiences designed to help individual and communities improve their health by increasing their knowledge or influencing their attitudes. Health education from all indications enhances and promotes societal development because it encourages healthy practices that promote the well beings of individuals and discourage ugly practices that are inimical to the health of individuals. According to Donatelle (2009), health education is a principle by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance, or restoration of health.

The role of health education in this content therefore is to ensure individuals maximally abreast with health information so as to determine the kind of health practice they indulge in, to know things to avoid, how to maintain their health status, where, when and how to handle health issues. Health education is used as a tool to control the harm from infectious diseases, reducing the arising health cost, reducing illness and death consequences that may arise from cigarette (Tobacco) smoking. Tobacco is an illicit drug, commonly abused universally, and it is a stimulant. Tobacco smoking is burning and inhaling the smoke into the mouth to the lungs and the releasing of it. It smokes consist of particles and gaseous phase.

Ordinarily, tobacco smoking is consumed through burning or smoking. It is achieved by combustion and the product or an active substance is haled through the upper respiratory tract into the alveoli of the lungs. The combustion is promoted by certain elements known as the potassium or nitrates. When tobacco is smoked, certain substances trigger chemical reactions in the nerve ending which increases the rate of heart, alertness and chemical reactions affecting other organs (Jeffery, 2005). These effects stimulate the release of chemical-like substances known as dopamine and endorphins which enhance the feeling of euphoria.

It is generally accepted that over twenty percent (20%) of young teenagers (13-15 years) smoked worldwide (Parrot and Winder, 1989). There is high involvement of females aligning themselves with tobacco smoking when compared with males. Adolescents start adulthood experience with smoking and drinking. There is wide spread of tobacco use in our society. The tobacco or cigarette producers warned that smoking is dangerous to health yet the number of smokers continues to increase. Tobacco is a gate way to other illicit drug use.

The use of tobacco in form of smoking is on the high side, it has become the practice of adults and adolescents males and females. The adolescent likes to hide the use of tobacco. Smoking in adolescence symbolizes the beginning of freedom. Robert (2001) stated that adolescent uses tobacco to feel cool and grown up. Smoking symbolizes independence and adulthood. Some girls use nicotine as an appetite suppressant. According to Robert (2001), cigarette smoke contains some four thousand chemicals, the most highly addictive of which is nicotine. He further stated that two hundred of the chemicals are known poisons. Nicotine which contains tobacco is inhaled, reaches the brain in only seven to ten seconds, the smoker

becomes alert, can think faster and feels calmer because nicotine triggers the release of a natural opiate chemical called beta endorphine (Robert, 2001).

It appears that the use of tobacco or cigarette is associated with pride, pressure from modern life curiosity, excitement, inferiority complex and shyness. La Place (2001) attributed a good number of deaths to smoking. Researchers have discovered a significant relationship between smokeless tobacco used and cancer of the mouth and throat: In fact, snuff and chewing tobacco users are fifty times more likely to develop oral cancer.

In any form of tobacco use either chewing which contains more nicotine, snuffing which is actually associated with irritation of the nasal nerves or smoking have issues on health implications to the life of the users. Tobacco use appears to have significant relationship with tuberculosis (T.B.). Tobacco smoke appears to have strong affiliation with induced asthma. Storm, Williams and David (1997) stated that when a person inhales tobacco smoke, irritating substances settle in the most lining of the airways. These substances can cause an attack in a person who has asthma. In addition, tobacco smoke damages tiny hair-like structures in the airways called cilia. Normally, cilia sweeps dust and mucus out of the airways. Tobacco smoke damages cilia, so they are unable to work allowing dust and mucus to accumulate in the airways. Smoke also causes the lungs to make more mucus than normal. As a result, even more mucus can build up in the airways, triggering an attack of asthma. Passive smoking means breathing in other people tobacco smoke. According to Rooney (2011) secondhand smoke is the combination of smoke from a burning cigarette and smoke exhaled by a smoker. Inhaling secondhand smoke also called "passive smoke" or "environmental tobacco smoke" may be even more harmful than actually smoking. This is because the smoke that burns off the end of a cigar or cigarette contains more harmful substances (tar, carbon monoxide, nicotine and others) than the smoke inhaled by the smoker. Secondhand smoke is especially harmful to people who already have asthma. When a person with asthma is exposed to secondhand smoke, he is more likely to experience the wheezing coughing and shortness of breath associated with asthma. Second-hand smoke is a danger to everyone but children, pregnant women and the partners of people who smoke are most vulnerable.

Use of tobacco is a trace from parenthood. Apart from intrinsic factors, smoking is a learnt act from parent, peer group influence, evidence of freedom, urbanity or civilization, independence and psychedelic appearance to social life. Smoking represents toughness in a man and liberation among females (La Place, 2011). General warnings from surgeon, medical and health practitioners say cigarette smoke contains carbon monoxide and it is dangerous to health. Tobacco smoke contains over chemical compounds, many are known as carcinogens, or cancer-causing agents. According to Parrott and Winder (1989), tobacco smoking is made up of gases, organic vapours and matters which includes tar and nicotine. They further stated that particulate matter forms about eight percent of tobacco smoke which contain cancer producing agent found in tobacco smoke. Laplace (2001) had also asserted that tobacco contains gases such as nitrogen, carbon dioxide oxygen and carbon monoxide which are inimical to health of individual and society. Tobacco smoking is dangerous because of its complications in the lungs, cough, pain and congestion at the thoracic region. Laplace (2001) stated that tobacco smoker (its chemical composition), physical effect of smoking on the body shows that life expectancy is reduced in an average of eight years in heavy smokers compared to non smoker. While Public Health Service stated that at every age from 35 years on, death rate is higher for cigarette smokers than for non-smokers.

Problems associated with a tobacco smokers are numerous. Young age of 6 years are found smoking, adolescents smoke cigarette without fear of authority, smokers along the street public places and even in their parental homes. Smoking of tobacco lead to the use of other illicit drugs such as cocaine, heroine and cannabis. Smoking affected productivity and co-existence. Relationship with co-workers both senior and junior staff is affected. The cost of nation spending towards the abolition and promulgation of laws banding smoking is increasing. School authorities and being faced with lawless behaviour from students. Effects of tobacco smoke on lives, community and the nation as a result of these problems prompted the researcher to investigate the risk factors associated with tobacco, if health education as a tool could be used to identify these factors as well as controlling its effects so as to enhance national development and health promotion.

The researcher found answers to the following research questions.

1. Does tobacco smoking increase the risk of becoming infected with tuberculosis?
2. Does tobacco smoking increase the risk of passive smoking effects?
3. Does tobacco smoking increase the risk of induced-asthma?

#### Hypotheses

1. Tobacco smoking would not significantly increase the risk of becoming infected with tuberculosis.
2. Tobacco smoking would not significantly increase the risk of passive smoking effects.
3. Tobacco smoking would not significantly increase the risk of induced-asthma.

#### Method and Procedure

##### Design

Descriptive research survey was used for the study because it helps to analyze, interpret data, describe information the way it exists in natural form.

##### Population of the Study

The population of this study was made up of 3000 people drawn from Ndokwa Constituency.

##### Sample and sampling Techniques

The sample size for this study was 300 people who were tobacco users representing ten percent (10%) of the total population. The purposive sampling technique was used to select the number of the respondents needed for the study.

The instrument for the collection of data was self structured questionnaire prepared in a modified Likert format using Strongly Agree (4 points), Agree (3 points), Disagree (2 points), Strongly Disagree (1 point). The face and content validity of the research instrument were ascertained by experts in the field of physical and health education. Reliability of the instrument was ascertained through the test-retest process. The data collected through the test-retest process were analyzed to estimate the reliability of the instrument by using the Pearson Product Moment Correlation Coefficient ( $r$ ). The instrument was considered reliable because it had Correlation Coefficient of 0.78.

The completed copies of the questionnaire were collected and the responses were tallied to get their frequencies. The simple percentage statistics was used for the research questions and ANOVA was used to test the stated hypotheses. All hypotheses were tested at 0.05 level of significance.

The results of the data analysis were presented in tables 1-6

Research Question 1: Does tobacco smoking increase the risk of becoming infected with tuberculosis?

Table 1: Percentage analysis of tobacco smoking increasing the risk of becoming infected with tuberculosis.

Variable	Gender	Agreed	%	Disagreed	%	Total	%
Tobacco Smoking increase risk of tuberculosis.	Male	120	40	50	16.67	170	56.67
	Female	100	33.33	30	10	130	43.33
	Total	220	73.33	80	26.67	300	100

Table 1, indicates that total of 220 (73.33%) of both male and female respondents agreed that tobacco smoking increase the risk of being infected with tuberculosis. While 80 (26.67%) disagreed, thus, conclusion can be drawn that tobacco smoking increases the risk of becoming infected with tuberculosis.

Research Question 2: Does tobacco smoking increase the risk of passive smoking effects?

Table 2: Percentage analysis of tobacco smoking increasing the risk of passive smoking effects.

Variable	Gender	Agreed	%	Disagreed	%	Total	%
Tobacco Smoking effect on passive smoking	Male	130	43.33	75	25	205	68.33
	Female	50	16.67	45	15	95	31.67
	Total	180	60	120	40	300	100

Total of 180 (60%) of both male and female respondents agreed to the fact that tobacco smoking increased the risk of passive smoking effects, thus conclusion can be drawn that tobacco smoking increase the risk of passive smoking effects.

**Research Questions 3: Does tobacco smoking increase the risk of induced asthma?**

**Table 3: Percentage analysis of tobacco smoking increasing the risk induce asthma.**

Variable	Gender	Agreed	%	Disagreed	%	Total	%
Tobacco Smoking and induced asthma	Male	100	33.33	90	30	190	63.33
	Female	70	23.33	40	13.33	110	36.67
Total	Total	170	56.67	130	43.33	300	100

Total of 170 (56.67%) of both male and female respondents agreed that tobacco smoking increases the risk induced asthma. Thus, conclusion can be drawn that tobacco smoking increases the risk of induced asthma.

**Hypothesis 1**

Tobacco smoking would not significantly increase the risk of becoming infected with tuberculosis. The result of the data analysis is presented in table 4.

**Table 4: ANOVA of tobacco smoking and Tuberculosis**

Source of variation	Sum of Square	df	Mean square	F	Sig.
Between groups	701.231	1	701.231	21.231	
Within groups	5479.619	88	68.468		.000
Total	6170.950	89			

The table 4 shows that tobacco smoking has a significant difference with becoming infected with tuberculosis (TB). The computed F-value of 21.231 was found to be significant at  $f = (1,88)$ ,  $p < 0.05$ . Therefore, the null hypothesis, which states that tobacco smoking would not significantly increase the risks of becoming infected with tuberculosis was rejected. Therefore, the alternative hypothesis which states that tobacco smoking increase the risk of becoming infected with tuberculosis was retained. This conclusion can be drawn that tobacco smoking increases the risk of becoming infected with tuberculosis (T.B.).

**Hypothesis 2**

Tobacco smoking would not significantly increase the risk of passive smoking effects. The result of the data analysis is presented in table 5.

**Table 5: Analysis of variance of tobacco smoking increasing the risk of passive smoking effects.**

Source of variation	Sum of Square	df	Mean square	F	Sig.
Between groups	1685.122	1	1685.331	30.365	
Within groups	5223.311	88	68.112		.000
Total	6908.433	89			

The table 5 shows that tobacco smoking has a significant difference of increase risk of passive smoking effect. The computed F-value of 30.365 was found to be significant at  $F = (1,88)$ ,  $p < 0.05$ . Therefore, the null hypothesis, which states that tobacco smoking would not significantly increase the risk of passive smoking effect, was rejected. Therefore, the alternative hypothesis which states that tobacco smoking increase the risk of passive smoking effect was retained. Thus, conclusion can be drawn that tobacco smoking increases the risk of passive smoking effects.

**Hypothesis 3**

Tobacco smoking would not significantly increase the risk of induced-asthma. The result of the data analysis is presented in table 6.

Table 6: Analysis of variance of tobacco smoking increasing the risk of induced-asthma.

Source of variation	Sum of Square	df	Mean square	F	Sig.
Between groups	1487.898	1	5091.234		
Within groups	6012.447	88	51.990	40.200	.000
Total <sup>a</sup>	7500.330	89			

The table 5 shows that tobacco smoking has a significant difference of increase risk of induced-asthma. The computed F-value of 40.200 was found to be significant at  $F = (1.88)$ ,  $p < 0.05$ . Therefore, the null hypothesis, which states that tobacco smoking would not significantly increase the risks of induced-asthma was rejected. Therefore, the alternative hypothesis which states that tobacco smoking increase the risk of induced-asthma was retained. Thus, conclusion can be drawn that tobacco smoking increases the risk of induced-asthma.

#### Findings of the Study

1. Tobacco smoking was a significant risk factor of becoming infected with tuberculosis (T.B.)
2. Tobacco smoking was a significant risk factor resulting to passive smoking effect.
3. Tobacco smoking was a significant risk factor that induced asthma.

#### Discussion

The finding obtained from this study as in table 4 shows that tobacco smoking in many ways has significant relationship with tuberculosis. Individuals can be affected with tuberculosis through passing on of half smoked cigarette to another person who may eventually be exposed to tuberculi bacilli. This is in line with PHAC (2010), it showed that there was strong association between smoking tobacco and tuberculosis, cigarette smoking is harmful because smoke damages the lungs and can make smokers more susceptible to tuberculosis infection. Further stated, smoking harms the body's immune system, meaning smokers are less able to combat tuberculosis infection and reduce the effectiveness of tuberculosis treatment which can lead to longer periods of infection.

It was also observed that patients with latent tuberculosis cigarette smoking increase their risk of developing active tuberculosis diseases by two to three times, compared to non smokers. At this stage smoking becomes habitual, inevitable, difficult to give off, individual suffers more, becomes hazardous to the environment as well as polluting the environment with discharged sputum, putting others in danger. In the same vein, Yen, Yen, Lin, Chou, Deng (2014) stated that tobacco smoking increases the risk of tuberculosis (TB) recurrence. In view that cigarette smokers tend to associate together display oneness by doing things in common sharing cigarette and confined to a congested room or overcrowded room and this aid the spread of tuberculosis bacteria. Passive smoking means breathing into other people. Second-hand smoke is dangerous to everyone. A good number of people (non smokers) develop different health issues, such as bronchitis, pneumonia, CVD etc unknowingly from inhaled smoked air. This is line with Better Health Channel Report (2014) that passive smoking increases the risk of sudden infant death syndrome (SIDS OR cot death), middle ear disease, asthma, respiratory illnesses, lung cancer and coronary heart disease.

In our society, passive smoking is observed in every social gathering, at home, and in public places, smokers undermining the health consequences and its effects on national development. The finding obtained in table 6, shows that tobacco smoking increases the risk of induced asthma. This is in line with CDC (2014) that tobacco smoke is one of the most common asthma triggers, especially the effect on second hand smoke which is unhealthy to everyone especially people with asthma. These risk factors in a very high measure constitute health problems to health of individuals and countries. Once the society is sick, the nation is sick. Manpower, skills, productivity and development is affected hence this study is out to identify these risk factors associated with tobacco smoking and how to curb these risk factors using health education to help in the nation development.

#### Conclusion

Health education as a course has the potentialities of inferring and identifying abnormalities in individual's health status. According to Awoyinfa and Adewunmi (2012) that objectives of health education is to make people value health as a worthwhile asset, with a desire to living long and feeling well, and with the support of health personnel, to learn what they can do as individuals, families and communities to protect and

improve their own health. They further stated that the more people value their health, the more they will be willing to promote and safeguard their own health.

Tobacco smoking is an act people who are addicted to tobacco find difficult to give up. Tobacco smoking if left without health education is capable of destroying individual's life. The nation's economy may be affected from the angle of health budget and reduced manpower as a result of illness and death. When health education is put into practice, it will go along way to strengthening the nation economy and rapid development as well as promoting health for all in our society.

#### Recommendations

- Based on the findings of this study, the following recommendations were made.
1. Government should promote health of individuals by legislating on the control of tobacco smoking, and withdrawal of production license.
  2. Government should monitor the production of tobacco quality and components of the tobacco itself.
  3. A new product should be tested before releasing it to the public.
  4. There should be innovation and constant research on the production of tobacco so as to update the standard and quality of tobacco.
  5. The evaluation and monitoring teams should know the statistical strength on the demand and supply of tobacco so as to guide excessive supply and demand of tobacco.
  6. The body in charge of movement of tobacco into the country should be strictly adherent to their duty to avoid smuggling.
  7. Taxation on production, selling houses and distribution should be increased.
  8. Dormant laws of 5 years imprisonment for smoking in the public should be enforced with appropriate cautioning without favour.
  9. Labeling should contain manufactured, expiration date, batch number, country produced and NAFDAC number.
  10. Seminar, conferences and public lectures should be constantly organized to pass health information on the consequences of tobacco use to individuals.
  11. Government should control and monitor the different types and ways of tobacco advertisement. Possibly the cost of tobacco advertisement in our media should be increased.
  12. Teaching of tobacco use starts from the home, parents should show good examples to their children by not displaying the act before the children since children learn by imitation.
  13. Individuals who had been involved in heavy smoking should find alternative means of satisfying such pleasure and not cigarette.
  14. However, any person with these disorders should seek for medical treatment.

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